

**BEFORE THE ENERGY COMMISSION
OF THE STATE OF CALIFORNIA**

In the Matter of:

Exploring Issues Associated with
Implementation and Distribution
Planning of Distributed Generation

Docket Nos.
04-DIST-GEN-1
and 04-IEP-1

**COMMENTS OF BLUEPOINT ENERGY INC. ON THE CALIFORNIA ENERGY
COMMISSION INTERGRATED ENERGY POLICY REPORT COMMITTEE,
RECOMMENDED CHANGES TO INTERCONNECTION RULES
FINAL REPORT**

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BluePoint Energy Inc. submit these comments to the IEPR Committee Recommended Changes to Interconnection Rules (Final Report). These comments are submitted to the California Energy Commission (Energy Commission) pursuant to the posted schedule in the notice of committee hearing in the above-noted dockets. These comments focus on issues raised in the Committee hearing regarding Dispute Resolution. TecoGen discussed requirements placed on generation that had been certified under Rule 21 that went beyond the Rule 21 requirements. In particular, they required Redundant Relays. The following comments relate to the issue of Redundant Relays.

Redundant Protective Relays – DG Operator Perspective

By: Chuck Sorter of BluePoint Energy Inc.

Prudent installation and operation of a DG facility from the owner / operator perspective is driven from both financial and engineering perspectives beginning with the initial facility examination as to physical installation requirements through to the operational feasibility and financial return to the system or facility owner. Literally, all requirements from construction to interconnection to operation that will impact the lowest “cost per kW installed” are examined in detail prior to any project acceptance or approval.

From a combined heat and power (CHP) standpoint, the larger the addressable site loads for electrical and thermal application, the more economical the project.

Lowest possible installation cost *and* the application of prudent engineering practices for the protection of both the client and the utility systems determine the minimum protective devices required from a purely technical standpoint. The requirement for using protective relays **59** - Over Voltage, **27** – Under Voltage and **81** - Over/Under Frequency for induction and additionally **25** – Sync Check for synchronous systems may have been adequate years ago but prudent practice began to add more and more devices as the protective need arose. Concerns by some utilities and concurrence by knowledgeable owner / operators soon saw device **32R** – Reverse Directional Power as the next additional device.

Most manufacturers of DG systems from a purely cost savings standpoint designed a “standard” package into their smaller (under 500kW) units that complies with the different interconnection requirements to which the DG system could be expected to interconnect. The standards selected were IEEE 1547, UL 508, UL 1741 and UL 2200. Control / Parallel systems were designed around these standards and were included in the packaged unit to lower costs and shorten interconnection approval. Typically all currently manufactured units ADDED *as a minimum*, **32** – Overload; **32F/37** – Reduced Power; **40** – Loss-of- field; **46** – Negative Sequence Overcurrent; **47** – Negative Sequence Overvoltage; **50/51** – Time-over-current; **51V** – Inverse Time Overcurrent; **59** – Phase Overvoltage; **60FL** – VT Fuse-Loss Detection and **79** – Reconnect Enable Time Delay.

Most units maintain an Increment of 1 cycle, provide remote monitoring and alarm capability, have battery backup and revenue (utility acceptable) grade gas, electrical and thermal metering. Interconnections using these recognized control systems under UL 508, appropriate IEC 60255 & 61000 and ANSI/IEEE C37.90 are routinely accepted by most utilities across the country and around the world.

Manufacturers are confident that following approval and eventual completion of UL 1741 that a standard interconnection control scheme with the above mentioned protection devices can be utilized to allow safe, faster and lower cost installations by meeting the simplified Interconnection screens. Devices design will be adequate to preclude any utility from the blanket or incidental requirement of redundant relays. We feel the CPUC should take action to provide regulations which will assure that certified units in applications that meet the Rule 21 screens for simplified interconnection are eligible for simplified interconnection.